

What is claimed is:

1. A torque sensor comprising:
 - a first shaft and a second shaft connected coaxially;
 - 5 a torsion bar converting a torque applied between said first shaft and said second shaft into a torsion displacement;
 - a multipolar magnet fixed to said first shaft or to one end of said torsion bar;
 - one set of magnetic yokes fixed to said second shaft or to the other
 - 10 end of said torsion bar and disposed in a magnetic field generated by said multipolar magnet, said magnetic yokes being opposed to each other via an air gap in an axial direction; and
 - a magnetic sensor for detecting the density of magnetic flux generated in said air gap,
 - 15 wherein a non-magnetic spacer is disposed between said magnetic yokes as a means for positioning said one set of magnetic yokes, and
 - said spacer and said one set of magnetic yokes are integrated by resin molding.
- 20 2. The torque sensor in accordance with claim 1, wherein said magnetic yokes have a plurality of claw poles disposed in a circumferential direction at equal intervals,
 - said spacer retains said one set of magnetic yokes with a
 - predetermined gap in the axial direction and has at least one projection
 - 25 provided at each axial end surface thereof, and said projection is disposed between the claw poles neighboring with each other in said circumferential direction of said magnetic yoke, thereby positioning said one set of magnetic yokes in the circumferential direction.
- 30 3. The torque sensor in accordance with claim 1, wherein said

magnetic sensor is constituted by two separated sensors which are disposed in parallel with each other with respect to a direction of magnetic flux and have magnetism detecting directions mutually opposed by an angular difference of 180°.

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4. A torque sensor comprising:

a first shaft and a second shaft connected coaxially;

a torsion bar converting a torque applied between said first shaft and said second shaft into a torsion displacement;

10 a multipolar magnet fixed to said first shaft or to one end of said torsion bar;

one set of magnetic yokes fixed to said second shaft or to the other end of said torsion bar and disposed in a magnetic field generated by said multipolar magnet, said magnetic yokes being opposed to each other via an

15 air gap in an axial direction; and

a magnetic sensor for detecting the density of magnetic flux generated in said air gap,

wherein a non-magnetic spacer is provided to retain said one set of magnetic yokes with a predetermined gap in the axial direction,

20 said spacer has at least one projection provided at each axial end surface thereof,

said projection is disposed between claw poles neighboring with each other in the circumferential direction of said magnetic yoke, and

said spacer and said one set of magnetic yokes are integrated by resin
25 molding.